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ABSTRACT

To provide longitudinal data on the effects of tutorial programs on retention/attrition, data were collected on 487 students tutored by Tutorial and Referral Services of the University of Cincinnati and on 292 non-tutored students who requested the program's assistance in 1978-1979. These students were tracked through the 1981-1982 school year. Data were gathered and analyzed on grade point averages, continued enrollment versus dropping out or failing, and other factors. The tutored and nontutored students were very similar on such success predictors as incoming grade point average (18.3% lower than the mean), test scores (as much as 43% lower), high school rank, and status as a nontraditional student (more than half were over 22 years old). The results of the study include the following: (1) 36% of the nontutored group failed to enroll in 1979-80, whereas only 18.5% of the tutored group failed to enroll that year; (2) 24.3% of the remaining nontutored students left during 1980-81, compared to only 9% of the remaining tutored students; (3) students who left, among both groups, usually did not return in subsequent years; (4) the small group of tutored students who used the tutorial services most frequently and for the longest period were the most likely to be retained; (5) tutoring made a substantial difference in the retention of students over 30 years of age, students under 25, and black students; and (6) the greatest differences were found for blacks than for the other groups. Eight tables of data are appended. (KM)

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HELPING STUDENTS TO SUCCEED: A REPORT ON TUTORING AND ATTRITION AT THE UNIVERSITY OF CINCINNATI

BY

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Tutorial and Referral Services

1983

U.S. DEPARTMENT OF EDUCATION
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As the financial constraints of the 1980s lead to increased belt-tightening at universities across the nation, considerable interest centers on the need for evaluating many programs, including those created in the late 1960s and early 1970s to assist non-traditional students who had previously rarely attended institutions of higher education. Retention of such students has been viewed as a special problem, since college "drop-outs" more commonly come from lower socioeconomic backgrounds than their traditional counterparts, rank lower in their high school classes, and are more likely to be black (Astin, 1964, 1975; Tinto, 1975). Some observers today are concluding that money spent on programs to help such students quite probably fail to yield a significant return on the initial investment--that support systems, in fact, have little impact on attrition.

Indeed, why fifty to sixty per cent of all students fail to complete their education is a complex question. Different studies have attributed this high dropout rate to a variety of factors, including inadequate academic preparation to enable students to compete effectively in college courses, fear of failure and lack of self-esteem, difficulty in adjusting to a university's bureaucracy, unsolidified educational and career plans and lack of financial resources (Cope, 1978; Anderson, 1978; Miller, 1978; Richard, 1974; Pantages and Creedon, 1978).

Numerous support systems were developed to address the retention of greater numbers of students. Yet, much research remains to be done about the actual effectiveness of strategies such as career planning, academic advising, new educational designs, assessment services, personal/social counseling and orientation, basic skills development, and tutorial services (Hillery, 1978; Crockett, 1978; Noel, 1978).

The research that is available suggests that one of these support services, tutoring, is strongly implicated in retention. Three early studies (1970-1971) discovered that tutoring reduced attrition for residence hall students, engineering students, and those enrolled in a college remedial program. Another examination of the impact of mathematics tutoring on student persistence in a California community college revealed that, although tutoring made no impact upon grades, it did increase self-esteem and persistence (Carman, 1975). More recently, at least two dozen developmental education programs, many of which included tutorial components, have compiled data which suggests that such programs do retain students at a higher rate than the overall institution. (Roueche and Snow, 1977; Walvekar, 1981; Collins, 1982; Boylan, 1983.)

Unfortunately, tutorial retention/attrition studies have rarely dealt with a comprehensive, campus-wide program at four-year institutions, or with longitudinal studies of such students over more than two years. Nor have they been able to utilize matched control groups, since ethical considerations preclude the random denial of service to students. Clearly, more research is needed to validate E. Martin Etters' statement that "For many low achievers, the tutorial assistance may well have meant the difference between...progress for graduation and an added accumulation of low grades which would have been a further handicap toward the minimum 'C' average needed for graduation" (Etters, 1967).

In an effort to provide such research, this investigation collected data on the success of students worked with by Tutorial and Referral Services, a Student Affairs unit at the University of Cincinnati. Since its origin in 1974, this program has provided study skills help, in-depth course-specific tutoring in all of the University's colleges, some personal

and academic counseling, and individualized assistance in building self-esteem. Students requested aid through their own initiative or upon referral by a professor, counselor, or other University official. Program personnel began keeping comprehensive records on every person who asked for help, beginning in the 1978-1979 school year.

Tutorial and Referral Services has had difficulty with securing stable funding, even within the course of the academic year. (For example, in 1978-1979, when the program was funded with Comprehensive Employment Training Act monies, only 31 part-time tutorial positions were allocated for the 800-plus students who requested assistance and the grant was terminated prematurely as well.) Therefore, large numbers of students could not receive any assistance, even when every tutor was working the maximum time allowable - twenty hours per week. Unfortunately, one-third of all students were thus randomly denied assistance. These constituted a control group for the program, and data was gathered on all students who sought but did not receive help, as well as those who did. This control group possessed the motivation to seek help--a characteristic that control groups in the existing tutorial literature have invariably lacked. Complete data was collected for 487 tutored students (the experimental group) and 292 non-tutored students who requested the program's assistance in 1978-1979.

STUDY DESIGN AND METHODOLOGY

Comparison of the Populations Studied

Although Tutorial and Referral Services extended assistance to virtually anyone who asked for it, the students who did so tended to be persons whose academic backgrounds would not predict success in a university setting. Their composite ACT, mathematics SAT, and verbal SAT scores averaged one-sixth to 43% lower than the average of their corresponding college. Their mean high school rank was 40% lower and their incoming grade point averages, when available, were 18.3% lower than the mean GPA of all students at the end of the school year. More than half of them were over 22 years of age. Fully 45% were Black and another 4% were other non-Whites or foreign students; five per cent were handicapped.

The nontutored and tutored students were very similar on such predictors of success as incoming grade point averages, test scores, high school rank, and status as a nontraditional student. With the exception of the incoming GPAs of white males, no significant differences existed between those students in the experimental and control groups. Chart #1 specifies the nontutored and tutored means and, moreover, illuminates some of the differences between these and overall university means. In this and subsequent charts, statistically significant differences between the tutored and nontutored groups will be indicated by an asterisk. Only colleges with at least ten students in both the experimental and control groups will be specified. Blacks fared much worse on the standard predictors of academic success, but available university records do not enable this researcher to compare the requesting students performance against overall racial means.

CHART #1: CHARACTERISTICS OF TUTORED AND NONTUTORED STUDENTS, 1978-1979

Composite ACTs	N	Experimental Group Mean	N	Control Group Mean	University Mean
All Students	253	16.2	146	15.7	20
White Males	71	20.9	38	20.5	
White Females	53	19.2	38	19.5	
Black Males	32	14.6	14	11.4	
Black Females	92	10.9	54	11.2	
College of Arts and Sciences	87	17.0	49	17.6	22
University College (2-year)	63	10.5	26	11.0	15
Col. of Business Administration	49	15.6	31	14.9	21
Engineering Col.	29	22.8	17	24.1	26

SAT Scores	N	Experimental Group Mean	N	Control Group Mean	University Mean
Mathematics	169	458.4	83	456.6	496
Verbal	169	410.0	83	417.5	444
White Males-M	64	484.6	35	498.6	
White Males-V	64	452.3	35	441.8	
White Females-M	39	456.2	25	458.3	
White Females-V	39	465.9	25	430.6	
Black Males-M	19	369.5	6	436.7	
Black Males-V	19	351.6	6	351.8	
Black Females-M	39	332.3	13	373.8	
Black Females-V	39	323.6	13	353.8	

High School Rank in Percentiles					
All Students	316	.36	171	.33	.22
White Males	90	.35	52	.37	
White Females	70	.36	45	.27	
Black Males	36	.41	17	.45	
Black Females	109	.36	54	.32	
College of Arts and Sciences	108	.32	56	.30	.18
University Col.	73	.49	30	.48	.31
Col. of Business Administration	56	.40	43	.38	.22
Engineering Col.	34	.21	18	.17	.08

Age				
All Students	487	22.2	292	21.9
White Males	132	21.0	77	21.2
White Females	96	21.1	79	22.8
Black Males	66	22.3	39	21.5
Black Females	172	22.7	88	22.6

Objectives and Parameters of the Study

After the essential similarity of the tutored and nontutored populations was determined, both groups were checked against the University's enrollment records for each quarter of the 1978-1979 through 1981-1982 years to determine which students left the University, which remained, and which graduated. If tutoring helped students to succeed academically, we would expect nontutored students to have a higher attrition rate, a lower rate of graduation, and a lower cumulative grade point average. (Based on the overall pre-tutoring similarity of the two groups, it was anticipated that dropping out for reasons unrelated to grades would be equally prevalent in both groups.)

Although academic probation requirements varied from college to college, a 2.00 cumulative grade point average was almost universally the break-off point, and this determined our differentiation of students into two categories, those with under a 2.00 and those with a 2.00 or higher. However, since grades may be more closely connected to attrition for certain groups of students (say blacks as compared with whites, men as compared with women, and older students as compared with younger), attrition and grade data were isolated for all such groups and the results analyzed.

RESULTS

Overall Attrition and Grades

Although the tutored and nontutored groups were similar in their academic performance and potential (as measured by ACT and SAT scores) before they requested assistance, they were not equally likely to remain in school. Fully 36.0% of this nontutored group in 1978-1979 failed to enroll for any quarter of 1979-1980, whereas just 18.5% of the tutored group

failed to do so. This difference in attrition held up for all colleges of the University. The overall difference is significant at the p .001 level. Those students who did not leave school in 1979-1980 and did not graduate by summer quarter of that year continued to have a significantly higher drop-out rate in 1980-1981 if they were not tutored. The percentage of students leaving in that year was 24.3% of the remaining control students but only 9.0% of the remaining experimental students. Only by year four of this study, 1981-1982, did the two groups of remaining students have equivalent rates of enrollment. Then, again after the number of graduates by summer quarter of 1980-1981 is subtracted, 14.4% of the students tutored in 1978-1979 failed to enroll, compared with 15.5% of those remaining in the nontutored group. Over this four year period, fully 31.1% of the experimental and 54.8% of the control group left school for at least one year. Those who did leave usually did not return in subsequent years. They were drop-outs, not stop-outs, at least for the four years under examination. Of the students not enrolled during 1979-1980, 86.7% of the tutored and 83.2% of the nontutored failed to re-enroll in either 1980-1981 or 1981-1982.

The relatively small group of tutored students who combined high frequency of usage with the greatest extension of service over time were the most likely of all students to be retained. That is, of those students who received ten or more hours of tutoring per academic quarter for all three quarters of the 1978-1979 year, just 7.1% (n = 2 of 28 students) did not enroll in any subsequent year. Of those regularly tutored for only two quarters, 8.6% failed to enroll (n=3 of 35 students). This suggests that the statistical case for tutoring documented here is even more dramatic than it appears if one erroneously assumes that all the students in the

tutored population were in fact equally tutored, and therefore equal recipients of the time and money invested in the program. The evidence suggests that, for the best possibility of retention, resources and effort should be committed to helping each student for at least two consecutive quarters, and preferably three.

It appears that the nontutored group's attrition rate was 71% higher than that of the tutored group largely because nontutored students were not making the grades necessary to keep them in school and maintain their self-esteem. Although 41.2% of all nontutored students had a cumulative grade point average of le : than 2.00 at the end of the 1978-1979 year, just 27.5% of the tutored students fell into that category. Indeed, tutored students earned a mean cumulative GPA of 2.32 by that date, compared with the nontutored student's 2.19 mean. This difference is significant at the p=.02 level. When considered by the colleges of major program use, the mean 1978-1979 GPA for freshmen requesting assistance often exceeded the university-wide freshmen college average, whereas the mean nontutored GPA failed to reach the overall college figure. Thus, for the College of Arts and Sciences, University College (the two-year open admissions unit), and the College of Business Administration comparisons are as follows:

Sex	College	Overall $\bar{X}$ GPA	Tutored $\bar{X}$ GPA	% Difference	Nontutored X GPA	% Difference
Males	A & S	2.22	2.41	+8.6%	2.22	Even
	Univ.	1.81	2.08	+14.9%	1.68	-7.2%
	Bus. Adm.	2.37	2.47	+4.2%	2.21	-6.8%
Females	A & S	2.54	2.26	-11.0%	2.26	-11.0%
	Univ.	2.05	2.11	+2.9%	2.04	-.0%
	Bus. Adm.	2.74	2.32	-15.3%	2.29	-16.4%

Moreover, if the requesting individual's incoming GPA is compared with his/her outgoing GPA (at the end of summer quarter, 1978-1979), the tutored students increased their grades an average of .06, whereas the nontutored lost an average .02 points. For these results, p=.015.

These differences held up for students from every class. The mean post-tutored 1978-1979 grade point average of the freshmen, sophomores, juniors, and seniors who requested assistance and were tutored exceeded that of the non-assisted requestees. That difference was especially remarkable for freshmen, for whom it reached statistically significant levels. The mean tutored freshman GPA reached 2.23, compared with the mean nontutored 1.98. When students who possessed a grade point average at the time they requested help are considered, they added points to their overall GPA at a higher level of proficiency for all classes, even though the incoming GPA for freshmen was usually earned during summer quarter, when hours carried were fewer, courses involved larger numbers of "easy" courses such as physical education offerings, and GPAs were thus higher. That level of proficiency achieved statistical significance in the sophomore class, where tutored students gained .08 points while their nontutored counterparts lost .06 points off their outgoing GPA.

The nontutored students' attrition was substantially higher for all classes as well, reaching statistically significant levels for the freshmen and sophomores. Fully 22.7% of all freshmen in the experimental group failed to enroll in classes for their sophomore year, but 41.3% of the freshmen in the control group fell into that category. Just 15.2% of the tutored and 16.7% of the nontutored freshmen who left the University returned in a subsequent year. Moreover, the attrition rate of the nontutored freshmen still remaining in 1979-1980 exceeded that of the tutored in 1980-1981 (their prospective junior year) as well. Only for the 1981-82 school year did the attrition rates of those students who still remained at the University in 1980-1981 achieve equality. Tutoring received in the

freshman year thus still had effects two years later. All in all, 42.9% of the tutored and 65.9% of the nontutored freshmen left the University for at least one year.

For sophomores requesting assistance in 1978-1979, the continued results were equally impressive. In 1979-80, 21.0% of the tutored and 34.8% of the nontutored group failed to enroll. Comparable percentages for those students remaining for that year but leaving in the next were 7.%0 and 25.4%, respectively. Even those nontutored sophomores who continued their education into the 1980-1981 year, however, unlike the freshmen, were more likely to leave in 1981-1982--by a 28.6% to 13.6% margin. Just 30.7% of the tutored sophomores but full 60.9% of the nontutored left the University for at least one complete year between 1979-80 and 1981-82. Tutorial and Referral Services had a similar impact on the smaller numbers of juniors and seniors who asked for help. Only 9.3% of the tutored juniors and none of the tutored seniors left the university (without graduating), compared with 30.4% and 20.0%, respectively, of the nontutored groups.

Tutorial and Referral Services also enjoyed considerable success in removing students from academic probation. One-fourth of all sophomores, juniors, and seniors who were tutored were on probation at the time they requested assistance, as were one-third of the nontutored group. With tutoring, 38.8% of the sophomores, 90% of the juniors, and 66.7% of the seniors were removed from probation. Comparable figures for the nontutored were 22.2%, 20%, and 25%, respectively. Overall, 48.4% of the tutored and 22.2% of the nontutored left probation, a result which is statistically significant.

The tutors' ability to help students improve their academic skills was a crucial dimension in keeping students off academic probation and thereby

facilitating retention. In fact, 54% of the tutored and 44.4% of the nontutored students who left the university for at least one year possessed an overall grade point average of under 2.00. The percentages were highest--60.8% for tutored, 53.8% for nontutored students--for the freshmen who left. Students themselves, on quarterly evaluation forms, indicated their belief that tutoring was responsible for their retention; 34% of the respondents maintained that they would not have been able to survive their first year at the university without assistance. The academic (and personal) work which tutors perform apparently makes a lasting impact. Not only does the widening gap in attrition in subsequent years reveal that, but so too does the fact that of all tutored students continuing to be enrolled in 1981-1982, just 7% of them had an overall grade point average lower than 2.00. At rock-bottom was one student whose GPA was 1.90. In comparison, 9% of the nontutored students enrolled that year had not managed to achieve a 2.00.

As many more tutored students left academic probation, so too did many more graduate. Two sevenths of the tutored and one-sixth of the nontutored students graduated by 1981-1982. In each class, the percentage of tutored graduates exceeded the percentage of nontutored graduates; among the sophomores, the margin was nearly three to one. By a slight margin, the tutored group was also more likely to receive a second degree, including five persons who actually earned a master's after receiving an initial bachelor's degree. Students in both the control and experimental groups were not likely to pursue an education beyond the Associate's degree, however; only one-fifth of each group did so. Nor was there any difference in the percentage who continued enrollment after receiving the initial bachelor's degree.

Attrition by Age, Race, and Sex

Tutoring made a substantial difference in the retention of students over the age of thirty, those under the age of twenty five, and blacks. The older students apparently made a greater commitment to pursue a degree, since only 11.7% of the tutored and 33.3% of the nontutored persons between age thirty to sixty-seven ever left the university in the time under examination. Similarly, 25.5% of those tutored students between age 25 and 29 left, compared with 34.8% of their nontutored counterparts. The youngest group, those aged seventeen to twenty-four, had the highest attrition rates, with 37.0% of the experimental and 63.3% of the control group staying out of school for at least one year or more.

Of all groups under consideration in this study, the most astounding differences in the tutored and nontutored populations occurred for blacks. Just 33.3% of tutored black men and 37.2% of tutored black women left the university for at least one year before completing their educations. Comparable figures for the nontutored were 64.1% and 59.1%. The greatest differences emerged for blacks requesting help during their sophomore year; then, the attrition differences were 35.3% (tutored) to 60.0% (non-tutored) for black women and 32.3% to 72.7% for black men. Nontutored freshmen had equally high attrition rates, but the rates of the tutored group were slightly more high than those of the sophomores. Tutored blacks frequently graduated; 32.6% of all tutored black women and 27.3% of all tutored black men took home diplomas, compared with 18.2% and 17.9%, respectively, of their nontutored counterparts. Black females had higher percentages of graduates than did white females, but white and black males had comparable results.

Blacks achieved results comparable to, if not better than, white students, even though the whites had much higher incoming ACT scores, SAT scores, and incoming grade point averages. Blacks had to come a long way to reach good academic standing--indeed, the black sophomores were nearly three times as likely to be on academic probation when they requested assistance; 35.5% of all black females and 43.1% of all black males requesting assistance were on probation, while only 12.4% of white females and 21.6% of white males fell into that category. Aided by tutors to add an average of .13 (women) and .14 (men) points onto incoming grade point averages which hovered perilously around the 2.00 cut-off for academic probation, Blacks earned the grades necessary to keep them in school, while their nontutored contemporaries lost nearly as many points off their GPA's as the tutored group added! Tutored black males fared a full .42 points better in the differences between their incoming and outgoing GPAS than did their nontutored counterparts, and 60% of these tutored males on academic probation left it. None of the nontutored black males who requested assistance while on probation were able to leave it.

Unlike whites, blacks usually left school at least in part because of low grades. More than 70% of the black female freshmen and over 80% of the black male freshmen who asked for help and then failed to enroll for at least one full year had cumulative GPAS under 2.00. Corresponding figures for white males were somewhat lower and only one-fourth of all white female freshmen had under a 2.00. Charts #4 and 5 provide more detail for these and other comparisons by race and sex.

While tutoring translated into positive results in terms of Black attrition, graduation, and grades, the effects on whites were less marked.

The attrition and outgoing grade point average differences were significant for the white males at a level comparable to that of the blacks, but the incoming grades earned by white males were also significantly higher for the tutored group. Moreover, a larger percentage of the nontutored students were on academic probation when they requested help, notwithstanding their comparatively equal ACT and SAT scores. It can reasonably be asserted that some margin of the higher attrition rate for nontutored white males may be due to the better academic background of the tutored population at the time help was requested.

For white females, the results are even more interesting. White women requested assistance even though they generally had very good grades. Their incoming grades both in the tutored and nontutored populations were far higher than those of any other group. So were their post-tutored grade point averages. Yet, white women had the highest overall attrition rate for any tutored group--at 37.5%, compared to black females' 37.2%, black males' 33.3%, and white males' 29.5%. The attrition rate of nontutored white females--at 45.6%--was slightly (but not significantly) higher than that of their tutored counterparts, but that rate was considerably lower than the nontutored attrition rate of any other group. The nontutored white women's better pre-request grades help to explain in part, their lower attrition figures. But why did the white women in both the experimental and control groups have such high attrition rates, and why did black females with much lower grades remain in school? (This pattern, interestingly enough, is true of the university as well; proportionately fewer white women enroll annually from the freshmen through senior years.)

Clearly, more research is needed to explain why one out of every four white women who sought tutorial assistance and made adequate grades left the university. Several factors may have been responsible, including

but not limited to fear of success, a less firm commitment to higher education for a variety of reasons, and perhaps even a greater likelihood to shop around among colleges in the Cincinnati area. The "fear of success" literature, although quite controversial, generally asserts that many white female students, although they possess the ability to succeed in college, have difficulty accepting their own achievement because their sex-role socialization has conveyed the message that women are not supposed to be competitive with men or to achieve recognition for their academic accomplishments (Horner, 1972; Figurelli, 1977; Karabenick, 1977; Tresemer, 1975; Corrington, 1976; Orlofsky, 1978, 1981). Black women, on the other hand, according to such research, have been suited by their historical experience for a more active role in education and life. The higher valuation of women in many African tribes, the important role black women played in slave society, and the necessity for black women to search out jobs and support families could well translate into a desire to succeed in college. Thus, while the white women's accomplishment is often something she feels uneasy with, the black woman's accomplishment is a satisfying part of her individual identity (Puryear and Mednick, 1974; Weston and Mednick, 1972; Avery 1980). Such a conclusion is consistent with findings that black women have high self-concepts and more self-esteem than white women. (Simmons, et al., 1978; Wright, 1976.)

While a degree is apparently viewed by blacks, both men and women, as a vital means of securing better jobs, as a means to lift them out of poverty, the white women may not be driven so firmly by economic need. Substantially, more white women are subsidized by parents and are not employed while attending college. They may shop around more among community colleges. The private Catholic colleges in the Cincinnati area have less appeal for black women, who find the lack of a viable black community,

the costs, and the religious orientation there prohibitive. Moreover, although marriage is a concern for women of both races, black women are, according to some observers, "less confident that Prince Charming is going to come along and take them away to easy street" and they, unlike white women, see no conflict between marriage and career. (Epstein, 1973; Burlew, 1977.)

The evidence reveals tutoring apparently has important psychological, as well as academic, impact. The number of students who left school with grades above 2.00, as a percentage of the total students requesting assistance, was higher for the nontutored members of each group. Thirteen percent of the tutored and 23.9% of the nontutored black females fell into that category, as did 12.1% of tutored black males, 20.5% of nontutored black males, 18.9% of tutored white males, 23.4% of nontutored white males, 29.2% of tutored white females, and 38% of nontutored white females. In other words, when grades are not a factor, the nontutored students were still more likely to drop out. Such comparisons suggest that tutoring may help white women affirm a sense of personal worth through achievement and assist in alleviating some of the frustration, isolation, and alienation blacks experience in attempting to adjust to a new and at times seemingly hostile environment (Carroll, 1973). The tutor is, after all, someone who cares and can intervene to enable the student to cope more effectively with a huge bureaucracy. The role played by the tutor as both friend and mentor may explain the differences in attrition of those students who leave with a GPA of 2.00 or higher. (Factors other than tutoring could have influenced black retention, in particular, including financial concerns or condition of employment. Such factors, however, appear as uniformly in the tutored as the nontutored groups. The program's statistics reveal no differences

between the experiemental and control groups in terms of percentage of families on public assistance, percentage of students receiving state or federal grants, and percentage of students who worked.)

Overall, the evidence for our program is clear: tutoring retained a substantial number of students who might otherwise be expected to drop out. This was especially true for black students. In some colleges at the university, the differences in grades and attrition were virtually astounding. In University College, for example, tutoring had great impact on Blacks and white males. Tutored white males in that two-year college added .11 points to their outgoing grade point averages in the 1978-1979 year, while their nontutored contemporaries lost .02 points; 54.5% of the tutored but 100% of the nontutored white men left school for at least a year. Tutored black women there added a nearly equal margin of points to their GPAS and left school only 38.5% of the time. (The nontutored black women's figure was 65.7%.) The University College attrition rate for tutored black males was only 26.1%, while that of the nontutored black males was an incredible 81.3%. Black males from Arts and Sciences made perhaps the most impressive performance of any group, however; the attrition rate difference --at 42.9% for the tutored and 75.0% for the nontutored--was less than for University College black males, but a larger percentage of the A & S tutored group graduated--fully 42.9% to the U. College's 13.0%--and those students received bachelors', not associates', degrees. In fact, the percentage of black males who earned bachelors' was roughly comparable to the percentage of black women who did so (41.3%), but ranked far above the white male's (27.9%) and female's (25.7%) accomplishment. Tutored A & S black men added no fewer than .34 points to their GPAS--a record for any group by college--while nontutored A & S black males watched their GPAS disintegrate by .43 points--another record, this time for futility.

Differences between the performance of students in the colleges of major use are specified more fully on Chart #6.

The extent to which Tutorial and Referral Services personnel work with all Blacks who ultimately graduate is not easily determined. However, an examination of those receiving degrees in 1981-1982 reveals that considerable numbers of these worked with a tutor sometime between 1978 and 1981. Although none of the Blacks receiving doctorates and only 9.1% of those receiving master's degrees were tutored, one-fourth of all Blacks who earned a bachelor's degree and an equal proportion of all black females who earned an associate's degree received help. Tutored female graduates included 54.2% of those achieving a bachelor's degree in the College of Education, 42.4% of those who took home Arts and Sciences diplomas, and 38.3% of those earning University College associates's degrees. For tutored black males, percentages were highest in the Colleges of Business Administration (35.7%) and Education (40%). Even though the tutorial program was unable to work with many students off the university's main campus (in Raymond Walters College, Clermont College, Ohio Mechanics Institute/College of Applied Science, College of Medicine, College of Pharmacy, College of Nursing and Health), it should be noted that the actual number and percentage of tutored degree recipients in all colleges was actually much larger than the figures specified in Chart #7 indicate. Program records suggest that the average Black student who graduates takes five or six years to accomplish that goal, but our records do not extend further back than 1978-1979. Therefore, the freshman classes tutored in 1976-77 and 1977-78 were automatically exluded from consideration; this explains why 85.7% of the black males and 76.5% of the females graduating with bachelor's degrees in 1981-82 were worked with as sophomores. It appears reasonable to assume, conservatively, that we worked with an equivalent number of the graduates

as freshmen in 1976-78. Tutoral and Referral Services, then, provided help to approximately 43% of all black males who earned a bachelor's degree and to 50% of all such females, with the black females' percentage exceeding four-fifths of the total degree recipients in Arts and Sciences and Education. Yet, the program assisted, at some time between 1978 and 1981, just 13.3% of the Black freshmen class of 1978-79. As a comparison of charts #7 and 8 illustrates, the colleges of greatest use were also usually the colleges with the highest percentages of Black graduates. (The high percentage of Education graduates are, however, due to transfers from other colleges, primarily University College.)

Conclusion

This study of 487 tutored and 292 nontutored students has demonstrated that personalized tutoring can be a matter of considerable consequence in many students' lives and particularly in black students' lives. Since the tutorial program worked with 11.2% of all black male freshmen in 1978-1979 and with 14.6% of the incoming black females, it plays a vital role in the continued success of blacks at the University of Cincinnati. Tutoring, it seems clear, retains large numbers of blacks, many of whom graduate within a four or five year period, largely because the academic skills-upgrading keeps them off of academic probation. The personal support system provided for students by the program (as well as other developmental programs at the university) also helps keep more of those students in school who do have grade point averages above 2.00 but may be experiencing a good deal of frustration, if not alienation, in negotiating a complex university bureaucracy. White students benefit from the program as well, for differences

exist in the attrition rates here too, but whites do not have the life and death struggle with grades that the black students do. Fewer white students are tutored--just 2.6% of the freshman class of 1978-1979--and therefore the program's ultimate impact upon that population is less impressive. Still, for many whites, tutoring is also crucial for their continuance at the university.

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CHART # 2: GRADE, ATTRITION, AND GRADUATION DATA BY CLASS AND COLLEGE FOR STUDENTS REQUESTING ASSISTANCE, 1978-1979

	Freshmen		Sophomores		Juniors		Seniors		Other@		Total	
	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.
Number	238	138	176	92	43	23	22	20	8	19	487	292
GPA after '78-79	2.23*	1.98*	2.35	2.31	2.52	2.33	2.55	2.54	2.63	2.60	2.32*	2.19*
Difference between Pre & Post-Request Grades	+.06	-.01	+.08*	-.06*	+.06	+.04	+.03	-.02	.00	-.02	+.06*	-.02*
N Requesting Students on Acad. Probation	0	0	49	36	10	5	3	4	0	0	62	45
#Per Cent on Probation	.0	.0	27.8	39.1	23.3	21.7	13.6	20.0	.0	.0	25.7	33.3
N Leaving Probation	0	0	19	8	9	1	2	1	0	0	30	10
Per Cent Returning to Good Standing	.0	.0	38.8*	22.2*	90.0*	20.0*	66.7	25.0	.0	.0	48.4*	22.2*
N Leaving for at Least 1 Year	102	91	54	56	4	7	0	4	1	2	161	160
N Leaving with GPA under 2.00	52	57	24	19	1	2	0	1	0	0	77	79
Per Cent W/-2. GPA	51.0	62.6	44.4	33.9	25.0	28.6	.0	25.0	.0	.0	47.8	49.4
Per Cent Leaving	42.9*	65.9*	30.7*	60.9*	9.3	30.4	.0*	20.0*	12.5	10.5	34.2*	58.6*
N Leaving Who Re-Enrolled	12	14	4	7	0	0	0	1	0	0	16	22
$Per Cent Re-Enrolled of Those Leaving	15.2	16.7	7.8	15.6	.0	.0	.0	25.0	.0	.0	13.3	15.8
N Graduating	19	5	61	12	32	15	20	14	3	0	135	46
Per Cent Graduating	8.0*	3.6*	34.7*	13.0*	74.4	65.2	90.9	70.0	37.5	.0	28.7*	16.8*
N Receiving Associate's Degree, 1978-82	14	3	17	7	0	0	0	0	1	0	32	10
N Receiving Bachelor's Degree, 1978-82	5	2	46	5	32	15	20	14	2	0	105	36
N Receiving Master's Degree, 1978-82	0	0	0	0	1	0	4	1	0	0	5	1
N Receiving Two Degrees, 1978-82	0	0	2	0	1	0	4	1	0	0	7	1
N Continuing Education After Initial Degree	5	1	4	1	4	2	6	3	0	0	19	7
Per Cent of Graduates	26.3	20.0	6.6	8.3	12.5	13.3	30.0	21.4	.0	.0	14.1	15.2

@Includes Part-Time Students and Full-Timers Without a Classification
#Total Per Cent Based Only on Those Students Who Could Be on Academic Probation. Freshmen and Others Excluded.
$Those Leaving in the 1981-1982 Year for the First Time are Excluded, Since They Had No Opportuntiy to Return In the Period Under Study
*Statistically Significant Results
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CHART # 3: THE PROGRESS BY CLASS AND YEAR OF STUDENTS REQUESTING ASSISTANCE, 1978-1979

	Freshmen		Sophomores		Juniors		Seniors		Other		Total	
	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.
Number of Students, 1978-79	238	138	176	92	43	23	22	20	8	19	487	292
N Graduating 1978-79	0	0	5	3	0	1	15	10	1	0	21	14
Per Cent Graduating	.0	.0	2.8	3.3	.0	4.3	68.2	50.0	12.5	.0	4.3	4.8
N Not Enrolled, '79-80	54	57	30	31	2	6	0	4	0	1	86	99
Per Cent Not Enrolled	22.7*	41.3*	21.0*	34.8*	4.7*	27.3*	.0	30.8	.0	10.5	18.5*	36.0*
N Enrolled, 1979-80	184	81	143	59	41	16	13	9	7	18	388	183
N Graduating, 1979-80	8	2	19	5	24	9	4	5	0	0	55	21
Per Cent Graduating	3.4	1.4	10.8	5.4	55.8	40.9	30.8	38.5	.0	.0	11.3	7.2
Stop Outs Who Returned, 1980-1981	4	4	2	3	0	0	0	0	0	0	6	7
N Not Enrolled, '80-81 of Students Remaining in 1979-80	23	25	10	15	1	0	0	0	1	1	35	41
Per Cent Not Enrolled	12.5*	30.9*	7.0*	25.4*	5.5	.0	.0	.0	14.3	5.6	9.0*	24.3*
N Enrolled, 1980-81	162	59	118	42	20	9	9	4	6	17	315	131
N Graduating, 1980-1981	7	1	34	3	4	4	2	0	0	0	47	8
Stop Outs Who Returned, 1981-82	8	11	2	4	0	0	0	1	0	0	10	16
N Not Enrolled, 1981-82, of Students Remaining in 1980-1981	23	7	16	12	1	1	0	0	0	0	40	19
Per Cent Not Enrolled	14.2	11.9	13.6	28.6	5.0	11.1	.0	.0	.0	.0	14.4	15.5
N Enrolled, 1981-1982	140	63	70	31	15	4	7	5	6	17	238	120
Per Cent Still Enrolled of 1978-79 Total	58.8	45.7	39.8	33.7	34.9	17.4	31.8	20.0	75.0	89.5	48.9	41.1
N Graduating, 1981-82	4	2	5	1	5	1	3	0	2	0	19	4

CHART # 4: GRADE, ATTRITION, AND GRADUATION DATA BY CLASS, RACE, AND SEX FOR STUDENTS REQUESTING ASSISTANCE, 1978-1979

	Black Females						Black Males					
	Freshmen		Sophomores		Total		Freshman		Sophomores		Total	
	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.
Number	80	44	68	30	172	88	28	19	31	11	66	39
GPA after '78-79	1.99	1.74	2.09	1.89	2.06*	1.87*	2.04*	1.48*	2.17*	1.75*	2.12*	1.70*
Difference Between Pre & Post-Request Grades	+.12	+.01	+.20*	-.15*	+.13	-.07*	+.18*	-.08*	+.14*	-.25*	+.14*	-.14*
N Requesting Students on Acad. Probation	0	0	25	12	32	15	0	0	14	8	15	10
Per Cent on Probation	.0	.0	36.8	40.0	35.2	35.7	.0	.0	45.2	72.7	40.5	47.6
N Leaving Probation	0	0	7	4	12	5	0	0	8	0	9	0
Per Cent Returning to Good Standing	.0	.0	28.0	33.3	37.5	33.3	.0	.0	57.1	.0	60.0	.0
N Leaving for At Least One Year	37	30	24	18	64	52	12	13	10	8	22	25
Per Cent Leaving	46.8*	68.2*	35.3*	60.0*	37.2*	59.1*	42.9	68.4	32.3*	72.7*	33.3*	64.1*
N Leaving with GPA Under 2.00	26	22	14	7	41	31	10	11	4	5	14	17
Per Cent W/-2. GPA	70.3	73.3	58.3	38.9	64.1	59.6	83.3	84.6	40.0	62.5	63.6	68.0
N Leaving Who Re-Enrolled	4	4	0	2	4	6	2	4	1	2	3	7
Per Cent Re-Enrolled of Those Leaving	14.8	13.3	.0	16.7	8.5	13.0	18.2	36.4	12.5	28.6	13.6	28.0
N Graduating	10	3	26	6	56	16	1	0	10	1	18	7
Per Cent Graduating	12.5	6.8	38.2	20.0	32.6	18.2	3.6	.0	32.3	9.1*	27.3	17.9
N Receiving Associate's Degree, 1978-1982	8	3	11	3	19	6	1	0	4	1	5	1
N Receiving Bachelor's Degree, 1978-1982	2	0	17	3	39	10	0	0	6	0	13	6
N Receiving Master's Degree, 1978-1982	0	0	0	0	2	0	0	0	0	0	0	0
N Receiving Two Degrees, 1978-82	0	0	2	0	4	0	0	0	0	0	0	0
N Continuing Education After Initial Degree	3	1	2	1	11	2	1	0	0	0	3	0
Per Cent of Graduates Continuing Education	30.0	33.3	7.7	16.7	20.4	14.3	100.	.0	.0	.0	16.7	.0

(continued)

(continued from previous page)

	White Females						White Males					
	Freshmen		Sophomores		Total		Freshman		Sophomores		Total	
	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.
Number	50	36	32	28	96	79	69	38	42	22	132	77
GPA After 1978-1979	2.44	2.47	2.82	2.73	2.64	2.62	2.40*	2.01*	2.50	2.26	2.49*	2.18*
Difference Between Pre & Post-Request Grades	+.02	-.04	+.04	-.04	+.04	+.01	-.00	-.03	+.11	+.00	+.03	-.02
N Requesting Students on Acad. Probation	0	0	1	5	5	6	0	0	8	10	9	13
Per Cent on Probation	.0	.0	3.1	17.9	10.9	14.0	.0	.0	19.0	45.5	14.3	33.3
N Leaving Probation	0	0	1	3	5	4	0	0	3	1	4	1
Per Cent Returning to Good Standing	.0	.0	100.	60.0	100.0	66.7	.0	.0	37.5	10.0	44.4	7.7
N Leaving for At Least One Year	25	20	10	15	36	36	27	26	11	15	39	43
Per Cent Leaving	50.0	55.6	31.3*	53.6*	37.5	45.6	39.1*	68.4*	26.2*	68.2*	29.5*	55.8*
N Leaving with GPA Under 2.00	6	6	2	0	8	6	10	18	4	7	14	25
Per Cent W/-2. GPA	24.0	30.0	20.0	.0	22.2	16.7	37.0	69.2	36.4	46.7	35.9	58.1
N Leaving Who Re-Enrolled	1	3	1	0	2	3	5	3	2	3	7	6
Per Cent Re-Enrolled of Those Leaving	4.0	15.0	10.0	.0	5.6	8.3	18.5	11.5	18.2	20.0	17.9	14.0
N Graduating	5	1	11	3	24	9	3	1	14	2	36	13
Per Cent Graduating	10.0	2.8	34.4	10.7	25.0	11.4	4.4	2.6	33.3	13.6	27.3	16.9
N Receiving Associate's Degree, 1978-1982	2	0	0	2	2	2	3	0	2	1	5	1
N Receiving Bachelor's Degree, 1978-1982	3	1	11	1	22	7	0	1	12	1	31	12
N Receiving Master's Degree, 1978-1982	0	0	0	0	1	0	0	0	0	0	2	1
N Receiving Two Degrees, 1978-1982	0	0	0	0	1	0	0	0	0	1	2	1
N Continuing Education After Initial Degree	0	0	0	0	1	0	1	0	1	1	4	4
Per Cent of Graduates Continuing Education	.0	.0	.0	.0	4.2	.0	33.3	.0	7.1	50.0	12.1	30.8

CHART # 5: THE PROGRESS BY CLASS AND YEAR OF STUDENTS REQUESTING ASSISTANCE, 1978-1979, RACIAL AND SEXUAL DIFFERENCES

	Black Females						Black Males					
	Freshmen		Sophomores		Total		Freshman		Sophomores		Total	
	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.
Number of Students, 1978-79	80	44	68	30	172	88	28	19	31	11	66	39
N Graduating, 1978-1979	0	0	3	1	11	2	0	0	0	0	2	1
Per Cent Graduating	.0	.0	4.4	3.3	6.4	2.3	.0	.0	.0	.0	3.0	2.6
N Not Enrolled, 1979-1980	18	20	12	9	32	33	7	8	5	4	12	15
Per Cent Not Enrolled	22.5	45.5	17.6	30.0	18.6	37.5	25.0	42.1	16.1	36.4	18.2	38.5
N Enrolled, 1979-1980	62	24	55	21	131	54	21	11	26	7	52	23
N Graduating, 1979-1980	6	2	11	2	26	10	1	0	2	0	7	2
Per Cent Graduating	9.7	8.3	16.4	9.5	19.8	18.5	4.8	.0	7.7	.0	13.5	8.7
Stop Outs Who Returned, 1980-1981	2	2	0	2	2	4	1	1	1	1	2	2
N Not Enrolled, '80-81 of Students Remaining in 1979-1980	11	9	6	7	17	17	3	4	3	3	6	7
Per Cent Not Enrolled	17.7	37.5	10.9	33.3	13.0	32.1	14.3	36.4	11.5	42.9	11.5	30.4
N Enrolled, 1980-1981	50	16	38	14	99	32	17	8	22	5	44	16
N Graduating, 1980-1981	2	1	11	3	16	4	0	0	6	0	7	4
Per Cent Graduating	4.1	6.3	28.9	23.1	16.1	12.5	.0	.0	27.3	.0	15.9	25.0
Stop Outs Who Returned, 1981-1982	2	2	0	0	2	2	1	3	0	1	1	4
N Not Enrolled, 1981-1982 of Students Remaining in 1980-1981	8	1	7	2	15	3	2	1	2	1	4	3
Per Cent Not Enrolled	16.0	6.3	18.4	14.3	15.2	9.4	11.8	12.5	33.3	20.0	11.1	18.8
N Enrolled, 1981-1982	42	16	20	9	70	27	16	10	14	5	34	13
Per Cent Still Enrolled of 1978-1979 Total	52.5	36.4	29.4	30.0	40.7	30.7	57.1	52.6	45.2	45.5	51.5	33.3
N Graduating, 1981-1982	2	0	3	0	7	0	0	0	0	0	2	0
Per Cent Graduating	4.8	.0	13.6	.0	10.0	.0	.0	.0	.0	.0	5.9	.0

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	White Females						White Males					
	Freshmen		Sophomores		Total		Freshman		Sophomores		Total	
	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.	Tut.	Nontut.
N of Students, 1978-1979	50	36	32	28	96	79	69	38	42	22	132	77
N Graduating, 1978-1979	0	0	2	2	2	3	0	0	0	0	6	8
Per Cent Graduating	.0	.0	6.3	7.1	2.1	3.8	.0	.0	.0	.0	4.5	10.4
N Not Enrolled, 1979-1980	11	12	7	11	19	24	18	17	6	7	23	27
Per Cent Not Enrolled	22.0	33.3	23.3	42.3	20.2	31.6	26.1	44.7	14.3	31.8	18.3	39.1
N Enrolled, 1979-1980	39	24	23	15	75	52	51	21	36	15	105	43
N Graduating, 1979-1980	0	0	2	1	9	5	1	0	4	2	13	4
Per Cent Graduating	.0	.0	8.7	6.7	12.0	9.6	2.0	.0	11.1	13.3	12.4	9.3
Stop Outs Who Returned, 1980-1981	1	1	0	0	1	1	0	0	1	0	1	0
N Not Enrolled, 1980-1981 of Students Remaining in 1979-1980	5	6	3	3	8	9	4	6	0	2	4	8
Per Cent Not Enrolled	12.8	25.0	13.0	20.0	10.7	11.4	7.8	28.6	.0	13.3	3.8	18.6
N Enrolled, 1980-1981	35	19	18	11	60	39	47	15	34	12	91	34
N Graduating, 1980-1981	4	0	7	0	11	0	1	0	10	0	13	0
Per Cent Graduating	11.4	.0	38.9	.0	18.3	.0	2.1	.0	29.4	.0	14.3	.0
Stop Outs Who Returned, 1981-1982	0	2	1	0	1	2	5	4	1	3	6	8
N Not Enrolled, 1981-1982 of Students Remaining in 1981-1982	7	2	1	1	8	3	5	3	6	7	13	10
Per Cent Not Enrolled	20.0	10.5	5.6	9.1	13.3	7.7	10.6	20.0	17.6	58.3	14.3	29.4
N Enrolled, 1981-1982	24	19	11	10	42	38	46	16	19	8	81	32
Per Cent Still Enrolled of 1978-1979 Total	48.0	52.8	34.4	35.7	43.8	48.1	66.7	42.1	45.2	36.4	61.4	41.6
N Graduating, 1981-1982	1	1	0	0	3	1	1	1	0	1	6	2
Per Cent Graduating	4.2	5.3	.0	.0	7.1	2.6	2.1	6.7	.0	12.5	7.4	6.3

CHART #6: GRADE, ATTRITION, AND GRADUATION DATA BY RACE, SEX, AND COLLEGES OF GREATEST USE

	White Males								White Females					
	A&S		Univ.		Engr.		Bus. Ad.		A&S		Univ.		Bus. Ad.	
	Tut.	Nontut.	Tut.	Non.	Tut.	Non.	Tut.	Non.	Tut.	Nontut.	Tut.	Non.	Tut.	Non.
Number of Requesting Students	43	18	11	7	27	16	31	22	35	25	17	17	12	14
Outgoing GPA '78-79	2.56	2.35	2.14	1.89	2.38	2.04	2.57	2.29	2.61	2.54	2.33	2.49	2.87	2.66
Difference Between Pre & Post-Request Grades	+.14	-.04	+.11	-.02	+.05	+.05	+.05	-.08	+.06	+.04	+.13	+.09	+.22	-.05
N Leaving for at Least One Year	10	8	6	7	7	6	4	11	12	14	8	7	1	6
Per Cent Leaving	23.3*	44.4*	54.5	100.	11.1	37.5	12.9*	50.*	34.3	56.	47.1	41.2	8.3*	42.9
N Graduating	12	4	1	0	1	1	6	1	9	2	6	1	4	4
Per Cent Graduating	27.9	22.2	9.1	.0	3.7	6.3	19.4	4.5	25.7	8.	35.3*	5.9*	33.3	28.5

	Black Males						Black Females					
Number of Requesting Students	14	12	23	16	15	6	46	22	65	35	23	16
Outgoing GPA '78-79	1.96	1.76	2.06*	1.59*	2.25	1.91	2.00	2.00	2.05	1.88	2.04	1.97
Difference Between Pre & Post-Request Grades	+.34*	-.43*	+.10	-.07	+.03	+.05	+.07	+.07	+.13	+.01	+.04	-.10
N Leaving for at Least One Year	6	9	6	13	3	2	19	10	25	23	11	10
Per Cent Leaving	42.9*	75.*	26.1*	81.3*	20.	33.3	41.3	45.5	38.5*	65.7*	47.8	62.5
N Graduating	6	2	3	0	6	0	19	5	15	4	5	1
Per Cent Graduating	42.9*	16.7*	13.	.0	40.0*	.0*	41.3	22.7	23.1	11.4	21.7	6.3

CHART #7: BLACKS RECEIVING DEGREES, 1981-1982 YEAR, AND THE NUMBER OF THOSE WHO RECEIVED ASSISTANCE FROM TUTORIAL AND REFERRAL SERVICES SINCE 1978-1979

College	EARNING DOCTORATE						EARNING MASTER'S						EARNING BACHELOR'S						EARNING ASSOCIATE'S						TOTAL DEGREES					
	N		Receiving Assistance				N		Receiving Assistance				N		Receiving Assistance				N		Receiving Assistance				N		Receiving Assistance			
	M	F	M	%	F	%	M	F	M	%	F	%	M	F	M	%	F	%	M	F	M	%	F	%	M	F	M	%	F	%
Arts & Sciences	2	2	0	.0	0	.0	5	12	0	.0	0	.0	9	33	2	22.2	14	42.4	----------						16	47	2	25.0	14	29.8
Education	2	3	0	.0	0	.0	7	11	0	.0	3	27.3	5	24	2	40.0	13	54.2	----------						14	38	2	14.3	16	42.1
Design, Art, Arch.	0	0	0	.0	0	.0	3	5	0	.0	1	20.0	9	25	3	33.3	0	.0	----------						12	30	3	25.0	1	3.3
Social Welfare	0	0	0	.0	0	.0	1	1	0	.0	0	.0	2	6	0	.0	2	33.3	----------						3	7	0	.0	2	28.6
Engineering	1	0	0	.0	0	.0	1	0	0	.0	0	.0	10	3	2	20.0	1	33.3	----------						12	3	2	16.7	1	33.3
Business Admin.	1	0	0	.0	0	.0	2	1	1	50.0	0	.0	14	14	5	35.7	3	21.4	----------						17	14	6	35.3	3	21.4
Conserv. of Music	2	0	0	.0	0	.0	0	1	0	.0	0	.0	7	1	0	.0	0	.0	----------						9	2	0	.0	0	.0
Nursing & Health	0	0	0	.0	0	.0	0	5	0	.0	0	.0	1	5	0	.0	1	20.0	----------						1	10	0	.0	1	10.0
Law	3	9	0	.0	0	.0	----------						----------						----------						3	9	0	.0	0	.0
Medicine	8	7	0	.0	0	.0	----------						2	2	0	.0	0	.0	----------						10	9	0	.0	0	.0
Pharmacy	0	0	0	.0	0	.0	0	0	0	.0	0	.0	1	3	0	.0	0	.0	----------						1	3	0	.0	0	.0
Evening	----------						----------						0	0	0	.0	0	.0	20	28	0	.0	4	14.3	20	28	0	.0	4	14.3
University	----------						----------						----------						34	47	7	20.6	18	38.3	34	47	7	20.6	18	38.3
Clermont	----------						----------						----------						0	2	0	.0	0	.0	0	2	0	.0	0	.0
Raymond Walters	----------						----------						----------						2	11	0	.0	0	.0	2	11	0	.0	0	.0
Ohio Mechanics Institute	----------						----------						----------						13	0	1	7.7	0	.0	13	0	1	7.7	0	.0
Totals	19	21	0	.0	0	.0	19	36	1	5.3	4	11.1	60	116	14	23.3	34	29.3	69	88	8	11.6	22	25.0	167	261	23	13.6	60	23.0

CHART #8: STUDENTS IN FRESHMAN CLASS, 1978-1979, BY RACE AND SEX, ALONG WITH THOSE WHO REQUESTED AND RECEIVED ASSISTANCE FROM TUTORIAL AND REFERRAL SERVICES, 1978-1982

Blacks

College	Entering Class			Requested Assistance						Received Assistance					
	M	F	Tot	M	%	F	%	Tot	%	M	%	F	%	Tot	%
Arts & Sciences	65	127	192	24	36.9	49	38.6	73	38.0	13	20.0	26	20.5	39	20.3
University College	220	415	635	33	15.0	85	20.5	118	18.6	18	8.2	53	12.8	71	11.2
Business Administration	41	57	98	16	39.0	36	63.2	52	53.1	11	26.8	19	33.3	30	30.6
Engineering	8	10	18	3	37.5	3	30.0	6	33.3	2	25.0	2	20.0	4	22.2
Conservatory of Music	8	6	14	3	37.5	0	.0	3	21.4	3	37.5	0	.0	3	21.4
Education	6	26	32	2	33.3	0	.0	2	6.3	2	33.3	0	.0	2	6.3
Design, Art, & Architecture	11	22	33	2	18.2	1	4.5	3	9.1	0	.0	1	4.5	1	3.0
Nursing and Health	0	16	16	0	.0	11	68.8	11	68.8	0	.0	8	50.0	8	50.0
Continuing Education	7	8	15	1	14.3	4	50.0	5	33.3	0	.0	1	12.5	1	6.7
Raymond Walters	25	54	79	1	4.0	1	1.9	2	2.5	1	4.0	1	1.9	2	2.5
Applied Sciences	56	15	71	4	7.1	2	13.3	6	8.5	2	3.6	1	6.7	3	4.2
Law	5	5	10	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
Medicine	11	6	17	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
Clermont	0	0	0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
Totals	463	767	1,230	89	19.2	192	25.0	281	22.8	52	11.2	112	14.6	164	13.3

Whites

College	Entering Class			Requested Assistance						Received Assistance					
	M	F	Tot	M	%	F	%	Tot	%	M	%	F	%	Tot	%
Arts & Sciences	725	695	1420	44	6.1	70	10.1	114	8.0	31	4.3	43	6.2	74	5.2
University College	712	621	1333	20	2.8	28	4.5	48	3.6	9	1.3	16	2.6	25	1.9
Business Administration	629	250	879	42	6.7	34	13.6	76	8.6	13	2.1	21	8.4	34	3.9
Engineering	704	85	789	35	5.0	8	9.4	43	5.4	24	3.4	3	3.5	27	3.4
Conservatory of Music	112	127	239	14	12.5	13	10.2	27	11.3	10	8.9	10	7.8	20	8.4
Education	39	193	232	1	2.6	5	2.6	6	2.6	0	.0	3	1.6	3	1.3
Design, Art, & Architecture	255	289	544	3	1.2	7	2.4	10	1.8	1	.4	3	1.0	4	.7
Nursing and Health	2	130	132	0	.0	3	2.3	0	.0	0	.0	3	2.3	3	2.3
Continuing Education	315	25	340	2	.6	0	.0	2	.6	1	.3	0	.0	1	.3
Raymond Walters	291	560	851	1	.3	1	.2	2	.2	1	.3	0	.0	1	.1
Applied Sciences	315	25	340	2	.6	0	.0	2	.6	1	.3	0	.0	1	.3
Law	67	46	113	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
Medicine	135	58	193	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
Clermont	86	108	194	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
Totals	4387	3212	7599	164	3.7	169	5.3	333	4.4	91	2.1	102	3.2	193	2.6

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CHART #8: STUDENTS IN FRESHMAN CLASS, 1978-1979, BY RACE AND SEX, ALONG WITH THOSE WHO REQUESTED AND RECEIVED ASSISTANCE FROM TUTORIAL AND REFERRAL SERVICES, 1978-1982

Others

College	Entering Class			Requested Assistance						Received Assistance					
	M	F	Tot	M	%	F	%	Tot	%	M	%	F	%	Tot	%
Arts & Sciences	26	41	67	6	23.1	6	14.6	12	17.9	3	11.5	5	12.2	8	11.9
University College	0	0	0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
Business Administration	7	13	20	1	14.3	2	15.4	3	15.0	1	14.3	2	15.4	3	15.0
Engineering	8	1	9	1	12.5	0	.0	1	11.1	1	12.5	0	.0	1	11.1
Conservatory of Music	2	5	7	0	.0	2	40.0	2	28.6	0	.0	2	40.0	2	28.6
Education	4	13	17	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
Design, Art, & Architecture	10	5	15	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
Nursing and Health	0	1	1	0	.0	1	100.0	1	100.0	0	.0	1	100.0	1	100.0
Continuing Education	14	0	14	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
Raymond Walters	8	18	26	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
Applied Sciences	14	0	14	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
Law	4	1	4	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
Medicine	6	5	11	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
Clermont	1	2	3	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
Totals	104	105	209	8	7.7	11	10.5	19	9.1	5	4.8	10	9.5	15	7.2

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